

## 1 Introduction

The Single Entity Subregional Connectivity Task Force has focused on what a single Participant could do in the forward showing window to demonstrate transmission connectivity across the two subregions to lower their own PRMs. The Task Force has recognized that the addition of markets may enable additional connectivity and PRM-lowering solutions, but this concept document and task force scope does not aim to consider that aspect (a separate task force – Market Impacts on Subregion Connectivity (MISC) - has been identified to consider that scope). Similarly, the Single Entity Subregional Connectivity Task Force did not focus on operational logistics to understand all possible implications that might arise related to the usage of set a side transmission, actual flow, and possible implications to holdback obligations and reserve sharing.

It is intended that both solutions developed by the two Task Forces focusing on lowering the PRM may be able to coexist, though the relationship between the two would need to be considered to ensure compatibility of the solutions and their operational program implications.

It must be noted that this is a conceptual document and is not intended to propose specific changes to the WRAP Tariff or WRAP Business Practices. Instead, this concept document seeks to memorialize the points of conceptual agreement within this Task Force for further consideration in the stakeholder process for making Tariff and BPM revisions. **Nevertheless, this concept would need to proceed through the process outlined in the Tariff (and further detailed in business practices) for proposing a change, reviewing such a change with stakeholder comment, and seeking board approval.**

## 2 Proposal Summary

A Participant who is able to demonstrate in the forward showing window exclusive use of transmission rights to their WRAP load, originating within the other subregion, may be able to count such transmission as a one-for-one substitution for capacity required by their FS Capacity Requirement. By reducing the amount of capacity required for a particular Participants' FS Submittal, this option effectively lowers that Participant's PRM for the month for which they are demonstrating these inter-subregional transmission rights. The reduction in PRM from this framework is limited to the PRM of the lower PRM subregion as described in 3.1.1.

The transmission rights must be:

- OATT priority 6/7
- Originating within the other subregion at the central hub (in regions with central hubs) or at a point where multiple entities have indicated they can share diversity (in regions with or without a central hub)
- Terminating at the Participants WRAP load, and
- Supplemental to any transmission rights utilized in the FS Submittal to support capacity demonstrated in the FS Submittal.

## 3 Proposal Overview

## 3.1 Implications to Forward Showing Program

### 3.1.1 Forward Showing Capacity Requirement

With the current participation and WRAP Regional footprint, the Program Operator runs three loss of load expectation (LOLE) studies for each season: one for each of the two subregions (assuming no connectivity between the two) and one for the entire WRAP Region (assuming unconstrained connectivity between the two). Relative to the two subregional LOLE studies, the WRAP Region LOLE study always produces the smallest amount of aggregate capacity needed to meet a one-in-ten LOLE, and therefore also provides the lowest planning reserve margins for each month of a given Binding Season. Because the load resource mix is different in the two subregions, in general one subregion will receive a lower PRM from the LOLE study than the other subregion.

The low monthly PRMs provided by the WRAP Region LOLE study demonstrate that there *is* diversity available in the opposite subregion. This modeled diversity benefit is the basis upon which the one-for-one exchange of transmission capacity for generation capacity (plus associated deliverability demonstration) is being proposed.

Nevertheless, in the interests of ensuring the provision of this option is supported by the modeled results, the amount of transmission demonstration in lieu of generation capacity that each Participant can utilize to effectively reduce their own PRM will be limited by the modeling results in accordance with the equation below:

$$Transmission_{1-for-1} \leq (Subregional FSPRM_H - Subregional FSPRM_L) * Participant P50 Load$$

where

$Transmission_{1-for-1}$  is the amount of transmission a participant can demonstrate in a one-for-one exchange for generating capacity (in megawatts),

$Subregional FSPRM_H$  is the higher of the two subregional FSPRMs for a given month (%),

$Subregional FSPRM_L$  is the lower of the two subregional FSPRMs for a given month (%), and

$Participant P50 Load$  is a Participant's load as defined in the Tariff and as contributing to a Participant's FS Capacity Requirement (in megawatts).

Given that the equation is relative to the two subregional FSPRMs, it should be noted that this option is only available to one subregion each month (whichever has the higher FSPRM). Also note that this equation limits the extent to which a single Participant can utilize this option to effectively reduce their monthly FSPRM, but the option can be exercised for any amount up to this maximum for a given month where their subregion has the higher FSPRM.

When a participant utilizes this option, a participant will see a one megawatt credit toward meeting their FS Capacity Requirement for each megawatt of transmission capacity demonstrated (note that how the reduction gets translated to the Sharing Calculation in the Operations Program should be further considered when details are worked out).

### 3.1.2 Forward Showing Submittal

A Participant seeking to utilize this option will demonstrate to the Program Operator that they have procured OATT priority 6 or 7 transmission service from an eligible point in the subregion with the lower FSPRM to their own load in the given month for which the Participant seeks to effectively lower their FSPRM. If the subregion with the lower FSPRM contains a central hub (e.g., Mid-C hub), the origin of the demonstrated transmission must be at that hub; for example, if a SWEDE entity seeks to utilize this option in July when the FSPRM is higher in the SWEDE, they must demonstrate transmission rights for the month of July from Mid-C to their own load. If the region with the lower FSPRM does *not* contain a central hub (e.g. SWEDE) or Participants have transmission rights from one subregion to other subregion, the demonstrated transmission must connect to points (or a single point) where multiple entities have declared their ability to share diversity in the operations program. Identification of such points utilized in the Operations Program for a subregion with no central hub will need to be completed and locked with enough notice for Participants intending to utilize this option to procure service; identification of these specific points and the required number of participants discussed in Section 2 will need continued review to ensure Participants are able to share diversity at such points.

The demonstration of the requisite transmission rights and ensuing reduction in the Participant’s FS Capacity Requirement will occur in conjunction with the FS Submittal.

## 3.2 Implications to the Operations Program

### 3.2.1 Sharing Obligations / Access

During the Operations Program, Participants who have exercised this option must be able to access the diversity modeled to be available from the other subregion in order to maintain the reliability metric.

Participants who have utilized this option will always be able to decide whether to utilize this transmission to import energy from the other subregion – just as they are left the ability to determine how to deploy and utilize their generation and transmission capacity demonstrated in the FS Submittal in the operating time horizon, as well as whether to access the pooled capacity of the program for support.

$$\begin{cases} \text{Holdback}_{os} \leq \text{Transmission}_{1-for-1} - PSCR, & \text{for } 0 < PSCR \leq \text{Transmission}_{1-for-1} \\ \text{Holdback}_{os} \leq \text{Transmission}_{1-for-1}, & \text{for } 0 \geq PSCR \end{cases}$$

where

*Participant Sharing Calculation Result (PSCR)* is as defined in the Tariff and

*Holdback<sub>os</sub>* is the amount of Holdback Capacity the Participant is eligible to request from the other subregion for import on their demonstrated transmission rights (in megawatts).

In either of these circumstances, the Participant that has utilized this option is experiencing challenging system conditions. These two equations indicate that the other subregion will be provide capacity for the Participant to import to serve their own load on the transmission they demonstrated in the Forward Showing (recall that the LOLE modeling indicates there should be capacity available in the other subregion to serve this need under such

conditions). The equations are written to limit the amount of holdback available to the Participant from the other subregion to the amount of transmission they demonstrated at the Forward Showing, or the amount of need the Sharing Calculation indicates they may have for the day, whichever is lower.

When Participants who have exercised this option are assigned Holdback Requirements to support neighbors in their subregion, the Participant is eligible to request Holdback Capacity from the other subregion ( $Holdback_{OS}$ ) for import on their demonstrated transmission rights as follows:

$$Holdback_{OS} \leq \min \{Transmission_{1-for-1}, Holdback_A\}$$

where

$Holdback_A$  is the amount of Holdback Requirement assigned to the Participant who has exercised this option.

This equation enables Participants who have utilized this option to choose to import energy on their demonstrated transmission when they need to meet needs of neighbors. The option ensures neighbors of the Participant exercising the option are not negatively impacted by their decision to procure less capacity at the Forward Showing by providing a mechanism to access the diversity the LOLE modeling indicates will be available in the other subregion. Importantly, the pricing rules already established in the Tariff will incentivize the Participant utilizing this option to exercise more economic options if available and aims to properly compensate Participants providing such holdback for any opportunity costs.

The Sharing Calculations and resulting Holdback Requirements of the Participant exercising this option relative to the other Participants in their subregion are unchanged.

To whatever extent the Participant exercising this option does affirm need for Holdback Capacity from the other subregion, Holdback Requirements will be assigned to participants within the other subregion in the manner currently outlined in the Tariff (e.g., pro-rata in the NW and according to the SWEDE optimization in the SWEDE)

### 3.2.2 Settlement

Participants choosing to request holdback from the other subregion in accordance with section 3.2.1 will settle at tariff rates for the subregion from which they are importing capacity. There is no settlement associated with transmission in this circumstance.

### 3.2.3 Tagging

The Participant exercising this option will be responsible for taking receipt of energy deployments from the other subregion at a point of their demonstrated transmission right(s) (see section 3.1.2) and delivering it to their WRAP load .